

AMENDMENT TO THE

OSCEOLA TOWNSHIP

**FY2024 DRINKING WATER STATE REVOLVING FUND
WATER SYSTEM IMPROVEMENTS**

PROJECT PLAN

PER EGLE COMMENTS RECEIVED JULY 25, 2023

Prepared By:



July 27, 2023

Revised Aug. 8, 2023

INDEX

- 1) ~~Present Worth Analysis of Alternative #3: Alternate Project, including reduced scope of work of 1,000' of watermain replacement, well pump replacements, well house improvements, lead service line replacements in Dollar Bay and Tamarack City, and no water extension to Tamarack City, leaving Tamarack City on the existing water supply from Upper Michigan Water Company.~~
- 2) Present Worth Analysis of Alternative #4: Alternate Project, including reduced scope of work of 4,000' of watermain replacement, well pump replacements, well house improvements, lead service line replacements in Dollar Bay and Tamarack City, and no water extension to Tamarack City, leaving Tamarack City on the existing water supply from Upper Michigan Water Company.
- 3) ~~Alternative #3 Cost Projection and Water Rate Projection – Dollar Bay~~
- 4) ~~Alternative #3 Cost Projection and Water Rate Projection – Tamarack City~~
- 5) Alternative #4 Cost Projection and Water Rate Projection – Dollar Bay
- 6) Alternative #4 Cost Projection and Water Rate Projection – Tamarack City

Note on 8/8/2023 revision: Alternative #3, Reduced Scope of Work is deleted. This alternative was provided for a comparative example for Osceola Township information. As the Township selected the Full Scope of Work as best meeting their needs, the reduced scope of work alternatives were not included in the submitted Project Plan, and should not be included in this Amendment to the Project Plan.

**Osceola Township Water System Improvements
Cost Effective Analysis
Water System Improvements
Summary of Alternatives
Present Worth Analysis
Present Worth Monetary Evaluation**

| ITEM | ALTERNATIVE #4: ALTERNATE PROJECT -WATERMAIN REPLACEMENT (OPEN CUT - 4,000 LF) -WELL PUMP REPLACEMENTS AND RELATED WELL HOUSE IMPROVEMENTS -TAMARACK CITY REMAINS ON UMWC WATER SUPPLY -MISC. WATER TANK REPAIRS -LEAD SERVICE LINE REPLACEMENTS |
|---|---|
| CAPITAL COST | \$4,563,000 |
| ANNUAL O&M (DIFFERENTIAL DUE TO OPTION SELECTION) | \$0 |
| SALVAGE VALUE*; WATER MAIN REPLACEMENT | \$1,320,000 |
| PW**:Capital Cost(20) = \$1,800,000; DESIGN LIFE = 75 YEARS | (\$1,218,708) |
| SALVAGE VALUE*; WATER WELL PUMPS | \$0 |
| PW**:Capital Cost= \$150,000; DESIGN LIFE = 20 YEARS | \$0 |
| SALVAGE VALUE; WATER BOOSTER PUMPS | \$0 |
| PW**:Capital Cost=\$200,000; DESIGN LIFE = 20 YEARS | \$0 |
| ANNUAL RRI*** (REPAIR,REPLACEMENT,IMPROVEMENT) | \$16,620 |
| PW (RRI): PW Period = 20 YEARS; RRI=\$16,620 | \$318,839 |
| TOTAL PRESENT WORTH; O&M | \$0 |
| TOTAL PRESENT WORTH; SALVAGE VALUE | (\$1,218,708) |
| TOTAL PRESENT WORTH; RRI | \$318,839 |
| TOTAL PRESENT WORTH | \$3,663,131 |

*Salvage value at 20 years

**Present Worth calculated on 20 year period.

***RRI implemented for Elec/Mech components to establish annual cost value of short lived equipment and assets.

| Dollar Bay - Reduced Scope Alt 4 | | | | | |
|---|---|------------|----------------------------------|---------------|--------------------|
| <u>No.</u> | <u>DISTRIBUTION</u> | <u>Qty</u> | <u>Unit</u> | <u>U/Cost</u> | <u>Total</u> |
| 1 | Replace Watermain | 4000 | LF | 450 | \$1,800,000 |
| 2 | Replace Lead Service Lines - Dollar Bay | 110 | LF | 12000 | \$1,320,000 |
| 4 | Miscellaneous Hydrant Replacements | | EA | | |
| 5 | Misc. Watermain Valve Replacements | | EA | | |
| 8 | WM to Sandy Bottom - DB Channel | | FT | | |
| 9 | WM to Sandy Bottom - Hydrant | | EA | | |
| 10 | Replace Water Meters | | EA | | |
| | | | Total Distribution | | \$3,120,000 |
| <u>No.</u> | <u>WATER SOURCE</u> | <u>Qty</u> | <u>Unit</u> | <u>U/Cost</u> | <u>Total</u> |
| 11 | Replace Well Pumps | 2 | EA | 75000 | \$150,000 |
| 12 | Well House Improvements | 1 | LS | 50000 | \$50,000 |
| 13 | Storage Tank Improvements | | LS | | |
| | | | Total Source/ Storage | | \$200,000 |
| | | | Construction Total | | 3,320,000 |
| | Contingency, Bonding, Legal, Constr. Obs/Admin., Design | | | | \$863,200 |
| | | | Total | | \$4,183,200 |
| | | | Assume 75% EGLE SRF Grant | | |
| | | | Assume 25% EGLE SRF Bond | | \$1,045,800 |
| | | | Debt Service (1.875%, 40 years) | | \$37,397 |
| | | | Total Debt Service | | \$37,397 |
| | | | Customers | | 330 |
| | | | Additional Base Rate/Month | | \$9.44 |
| | Current Base Rate/ Mo. | | Current Base Rate/ Mo. | | \$36.50 |
| | | | Total rate/ mo. | | \$45.94 |
| | | | Water Usage: Included | | |
| | | | Ave. Residential Rate/ Mo.* | | \$45.94 |
| | | | <i>*for use of 4,000 gallons</i> | | |

| Tamarack City - Reduced Scope Alt 4 | | | | | |
|--|---|------------|-------------|--|------------------|
| <u>No.</u> | <u>DISTRIBUTION</u> | <u>Qty</u> | <u>Unit</u> | <u>U/Cost</u> | <u>Total</u> |
| 3 | Replace Lead Service Lines - TC (on private) | 35 | EA | 8000 | \$280,000 |
| | | | | Total Distribution | \$280,000 |
| <u>No.</u> | <u>WATER SOURCE</u> | <u>Qty</u> | <u>Unit</u> | <u>U/Cost</u> | <u>Total</u> |
| 6 | Extend Watermain Mason to Tamarack City | | LF | | |
| 7 | Booster Pump Station, Mason to Tamarack City | | LS | | |
| 11 | Replace Well Pumps | | EA | | |
| 12 | Well House Improvements | | LS | | |
| 13 | Storage Tank Improvements | | LS | | |
| | | | | Total Source/ Storage | \$0 |
| | | | | Construction Total | 280,000 |
| | | | | Contingency, Bonding, Legal, Constr. Obs/Admin., Design | \$72,800 |
| | | | | | \$352,800 |
| | | | | Assume 75% EGLE SRF Grant | |
| | | | | Assume 25% SRF Project Cost | \$88,200 |
| | | | | Capitalized Interest | \$0 |
| | | | | Upper Mich Water Co Fee | \$0 |
| | | | | Total SRF Loan(25% Project cost + Capitalized Interest + UMWC Fee) | \$88,200 |
| | | | | Debt Service (1.875%, 40 years) | \$3,154 |
| | | | | MDOT RR Fee | \$0 |
| | | | | Total Debt Service and Fee | \$3,154 |
| | | | | | |
| | Note: Current TC User | | | Customers | 170 |
| | at 3000 gal/mo. | | | Additional Base Rate/Month | \$1.55 |
| | = \$61.90/mo. | | | Current Base Rate/ Mo. | \$37.00 |
| | | | | New Total Base Rate/ mo. | \$38.55 |
| | | | | Water Usage: | \$24.90 |
| | | | | Ave. Residential Rate/ Mo.* | \$63.45 |
| | | | | <i>*for use of 3,000 gallons</i> | |
| | | | | | |
| | | | | Total: | \$4,536,000 |